



cgctcttacc tagtagaggt tgagtgaatt tcttgacttg tttctcctat tgggtgatct 60
cttaaaatat taaattcaaa atcaaagtat atattttaca atg aag tct tct ttc 115
Met Lys Ser Ser Phe
1 5

ccc aag ttt gta ttt tct aca ttt gct att ttc cct ttg tct atg att 163
Pro Lys Phe Val Phe Ser Thr Phe Ala Ile Phe Pro Leu Ser Met Ile
10 15 20

gct acc gag aca gtt ttg gat tca agt gcg agt ttc gat ggg aat aaa 211
Ala Thr Glu Thr Val Leu Asp Ser Ser Ala Ser Phe Asp Gly Asn Lys
25 30 35

aat ggt aat ttt tca gtt cgt gag agt cag gaa gat gct gga act acc 259
Asn Gly Asn Phe Ser Val Arg Glu Ser Gln Glu Asp Ala Gly Thr Thr
40 45 50

tac cta ttt aag gga aat gtc act cta gaa aat att cct gga aca ggc 307
Tyr Leu Phe Lys Gly Asn Val Thr Leu Glu Asn Ile Pro Gly Thr Gly
55 60 65

aca gca atc aca aaa agc tgt ttt aac aac act aag ggc gat ttg act 355
Thr Ala Ile Thr Lys Ser Cys Phe Asn Asn Thr Lys Gly Asp Leu Thr
70 75 80 85

FIG. 1A

ttc aca ggt aac ggg aac tct cta ttg ttc caa acg gtg gat gca ggg	403
Phe Thr Gly Asn Gly Asn Ser Leu Leu Phe Gln Thr Val Asp Ala Gly	
90 95 100	
act gta gca ggg gct gct gtt aac agc agc gtg gta gat aaa tct acc	451
Thr Val Ala Gly Ala Ala Val Asn Ser Ser Val Val Asp Lys Ser Thr	
105 110 115	
acg ttt ata ggg ttt tct tcg cta tct ttt att gcg tct cct gga agt	499
Thr Phe Ile Gly Phe Ser Ser Leu Ser Phe Ile Ala Ser Pro Gly Ser	
120 125 130	
tcg ata act acc ggc aaa gga gcc gtt agc tgc tct acg ggt agc ttg	547
Ser Ile Thr Thr Gly Lys Gly Ala Val Ser Cys Ser Thr Gly Ser Leu	
135 140 145	
agt ttg aca aaa aat gtc agt ttg ctc ttc agc aaa aac ttt tca acg	595
Ser Leu Thr Lys Asn Val Ser Leu Leu Phe Ser Lys Asn Phe Ser Thr	
150 155 160 165	
gat aat ggc ggt gct atc acc gca aaa act ctt tca tta aca ggg act	643
Asp Asn Gly Gly Ala Ile Thr Ala Lys Thr Leu Ser Leu Thr Gly Thr	
170 175 180	
aca atg tca gct ctg ttt tct gaa aat acc tcc tca aag aaa ggc gga	691
Thr Met Ser Ala Leu Phe Ser Glu Asn Thr Ser Ser Lys Lys Gly Gly	
185 190 195	

FIG. 1B

gcc att cag act tcc gat gcc ctt acc att act gga aac caa ggg gaa	739
Ala Ile Gln Thr Ser Asp Ala Leu Thr Ile Thr Gly Asn Gln Gly Glu	
200 205 210	
gtc tct ttt tct gac aat act tct tcg gat tct gga gct gca att ttt	787
Val Ser Phe Ser Asp Asn Thr Ser Ser Asp Ser Gly Ala Ala Ile Phe	
215 220 225	
aca gaa gcc tcg gtg act att tct aat aat gct aaa gtt tcc ttt att	835
Thr Glu Ala Ser Val Thr Ile Ser Asn Asn Ala Lys Val Ser Phe Ile	
230 235 240 245	
gac aat aag gtc aca gga gcg agc tcc tca aca acg ggg gat atg tca	883
Asp Asn Lys Val Thr Gly Ala Ser Ser Ser Thr Thr Gly Asp Met Ser	
250 255 260	
gga ggt gct atc tgt gct tat aaa act agt aca gat act aag gtc acc	931
Gly Gly Ala Ile Cys Ala Tyr Lys Thr Ser Thr Asp Thr Lys Val Thr	
265 270 275	
ctc act gga aat cag atg tta ctc ttc agc aac aat aca tcg aca aca	979
Leu Thr Gly Asn Gln Met Leu Leu Phe Ser Asn Asn Thr Ser Thr Thr	
280 285 290	
gcg gga gga gct atc tat gtg aaa aag ctc gaa ctg gct tcc gga gga	1027
Ala Gly Gly Ala Ile Tyr Val Lys Lys Leu Glu Leu Ala Ser Gly Gly	
295 300 305	

FIG. 1C

aca gga gaa aag tta tca gag aca gag gcc gca gat tct aaa aat ctt	1411
Thr Gly Glu Lys Leu Ser Glu Thr Glu Ala Ala Asp Ser Lys Asn Leu	
425	430
435	
act tcg aag cta cta cag cct gta act ctt tca gga ggt act cta tct	1459
Thr Ser Lys Leu Leu Gln Pro Val Thr Leu Ser Gly Gly Thr Leu Ser	
440	445
450	
tta aaa cat gga gtg act ctg cag act cag gca ttc act caa cag gca	1507
Leu Lys His Gly Val Thr Leu Gln Thr Gln Ala Phe Thr Gln Gln Ala	
455	460
465	
gat tct cgt ctc gaa atg gac gta gga act act cta gaa cct gct gat	1555
Asp Ser Arg Leu Glu Met Asp Val Gly Thr Thr Leu Glu Pro Ala Asp	
470	475
480	485
act agc acc ata aac aat ttg gtc att aac atc agt tct ata gac ggt	1603
Thr Ser Thr Ile Asn Asn Leu Val Ile Asn Ile Ser Ser Ile Asp Gly	
490	495
500	
gca aag aag gca aaa ata gaa acc aaa gct acg tca aaa aat ctg act	1651
Ala Lys Lys Ala Lys Ile Glu Thr Lys Ala Thr Ser Lys Asn Leu Thr	
505	510
515	
tta tct gga acc atc act tta ttg gac ccg acg ggc acg ttt tat gaa	1699
Leu Ser Gly Thr Ile Thr Leu Leu Asp Pro Thr Gly Thr Phe Tyr Glu	
520	525
530	

FIG. 1E

aat cat agt tta aga aat cct cag tcc tac gac atc tta gag ctc aaa	1747
Asn His Ser Leu Arg Asn Pro Gln Ser Tyr Asp Ile Leu Glu Leu Lys	
535 540 545	
 gct tct gga act gta aca agc acc gca gtg act cca gat cct ata atg	1795
Ala Ser Gly Thr Val Thr Ser Thr Ala Val Thr Pro Asp Pro Ile Met	
550 555 560 565	
 ggg gag aaa ttc cat tac ggc tat cag gga act tgg ggc cca att gtt	1843
Gly Glu Lys Phe His Tyr Gly Tyr Gln Gly Thr Trp Gly Pro Ile Val	
570 575 580	
 tgg ggg aca ggg gct tct acg act gca acc ttc aac tgg act aaa act	1891
Trp Gly Thr Gly Ala Ser Thr Thr Ala Thr Phe Asn Trp Thr Lys Thr	
585 590 595	
 ggc tat att cct aat ccc gag cgt atc ggc tct tta gtc cct aat agc	1939
Gly Tyr Ile Pro Asn Pro Glu Arg Ile Gly Ser Leu Val Pro Asn Ser	
600 605 610	
 tta tgg aat gca ttt ata gat att agc tct ctc cat tat ctt atg gag	1987
Leu Trp Asn Ala Phe Ile Asp Ile Ser Ser Leu His Tyr Leu Met Glu	
615 620 625	
 act gca aac gaa ggg ttg cag gga gac cgt gct ttt tgg tgt gct gga	2035
Thr Ala Asn Glu Gly Leu Gln Gly Asp Arg Ala Phe Trp Cys Ala Gly	
630 635 640 645	

FIG. 1F

tta tct aac ttc ttc cat aag gat agt aca aaa aca cga cgc ggg ttt	2083
Leu Ser Asn Phe Phe His Lys Asp Ser Thr Lys Thr Arg Arg Gly Phe	
650 655 660	
cgc cat ttg agt ggc ggt tat gtc ata gga gga aac cta cat act tgt	2131
Arg His Leu Ser Gly Gly Tyr Val Ile Gly Gly Asn Leu His Thr Cys	
665 670 675	
tca gat aag att ctt agt gct gca ttt tgt cag ctc ttt gga aga gat	2179
Ser Asp Lys Ile Leu Ser Ala Ala Phe Cys Gln Leu Phe Gly Arg Asp	
680 685 690	
aga gac tac ttt gta gct aag aat caa ggt aca gtc tac gga gga act	2227
Arg Asp Tyr Phe Val Ala Lys Asn Gln Gly Thr Val Tyr Gly Gly Thr	
695 700 705	
ctc tat tac cag cac aac gaa acc tat atc tct ctt cct tgc aaa cta	2275
Leu Tyr Tyr Gln His Asn Glu Thr Tyr Ile Ser Leu Pro Cys Lys Leu	
710 715 720 725	
cgg cct tgt tcg ttg tct tat gtt cct aca gag att cct gtt ctc ttt	2323
Arg Pro Cys Ser Leu Ser Tyr Val Pro Thr Glu Ile Pro Val Leu Phe	
730 735 740	
tca gga aac ctt agc tac acc cat acg gat aac gat ctg aaa acc aag	2371
Ser Gly Asn Leu Ser Tyr Thr His Thr Asp Asn Asp Leu Lys Thr Lys	
745 750 755	

FIG. 1G

tat aca aca tat cct act gtt aaa gga agc tgg ggg aat gat agt ttc	2419
Tyr Thr Thr Tyr Pro Thr Val Lys Gly Ser Trp Gly Asn Asp Ser Phe	
760 765 770	
 gct tta gaa ttc ggt gga aga gct ccg att tgc tta gat gaa agt gct	2467
Ala Leu Glu Phe Gly Gly Arg Ala Pro Ile Cys Leu Asp Glu Ser Ala	
775 780 785	
 cta ttt gag cag tac atg ccc ttc atg aaa ttg cag ttt gtc tat gca	2515
Leu Phe Glu Gln Tyr Met Pro Phe Met Lys Leu Gln Phe Val Tyr Ala	
790 795 800 805	
 cat cag gaa ggt ttt aaa gaa cag gga aca gaa gct cgt gaa ttt gga	2563
His Gln Glu Gly Phe Lys Glu Gln Gly Thr Glu Ala Arg Glu Phe Gly	
810 815 820	
 agt agc cgt ctt gtg aat ctt gcc tta cct atc ggg atc cga ttt gat	2611
Ser Ser Arg Leu Val Asn Leu Ala Leu Pro Ile Gly Ile Arg Phe Asp	
825 830 835	
 aag gaa tca gac tgc caa gat gca acg tac aat cta act ctt ggt tat	2659
Lys Glu Ser Asp Cys Gln Asp Ala Thr Tyr Asn Leu Thr Leu Gly Tyr	
840 845 850	
 act gtg gat ctt gtt cgt agt aac ccc gac tgt acg aca aca ctg cga	2707
Thr Val Asp Leu Val Arg Ser Asn Pro Asp Cys Thr Thr Thr Leu Arg	
855 860 865	

FIG. 1H

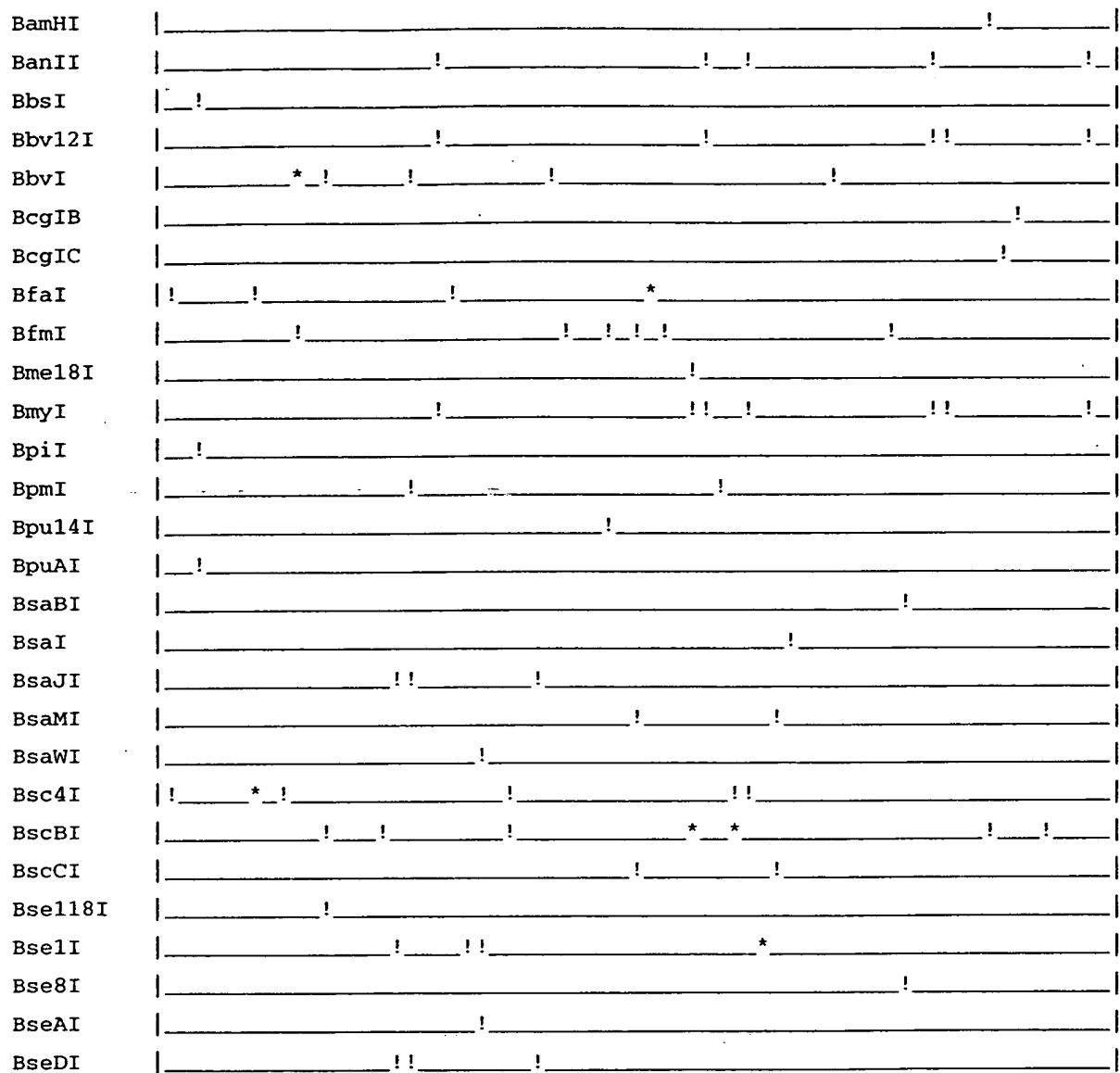


FIG. 2B

BseNI	_____ ! _ ! ! _____ *
BseRI	_____ ! _ ! ! _____
BsgI	_____ ! _____ ! _____
Bsh1236I	_____ ! _____
Bsh1365I	_____ ! _____
BsiBI	_____ ! _____
BsiCI	_____ ! _____
BsiHKAI	_____ ! _____ ! _____ ! ! _____ ! _
BsiLI	_____ ! _ ! _____ ! _____
BsiMI	_____ ! _____
BsiSI	_____ ! _____ ! _____ ! _____
BsiYI	! _ _ * ! _____ ! _____ ! ! _____
BsiZI	_____ ! _ * _____
BslI	! _ _ * ! _____ ! _____ ! ! _____
BsmAI	_____ ! _____ ! _____ ! ! _____ ! _____ * _ ! _____
BsmBI	_____ ! _____ ! _____
BsmFI	_____ ! _ ! _____ ! _____ ! ! _____
BsmI	_____ ! _____ ! _____
Bsp119I	_____ ! _____
Bsp1286I	_____ ! _____ ! ! _ ! _____ ! ! _____ ! _
Bsp13I	_____ ! _____
BspEI	_____ ! _____
BspHI	_____ ! _____
BspLI	_____ ! _ ! _____ ! _____ * _ * _____ ! _ ! _____
BspMI	_____ ! _____
BsrBRI	_____ ! _____
BsrFI	_____ ! _____
BsrI	_____ ! _ ! ! _____ *

FIG. 2C

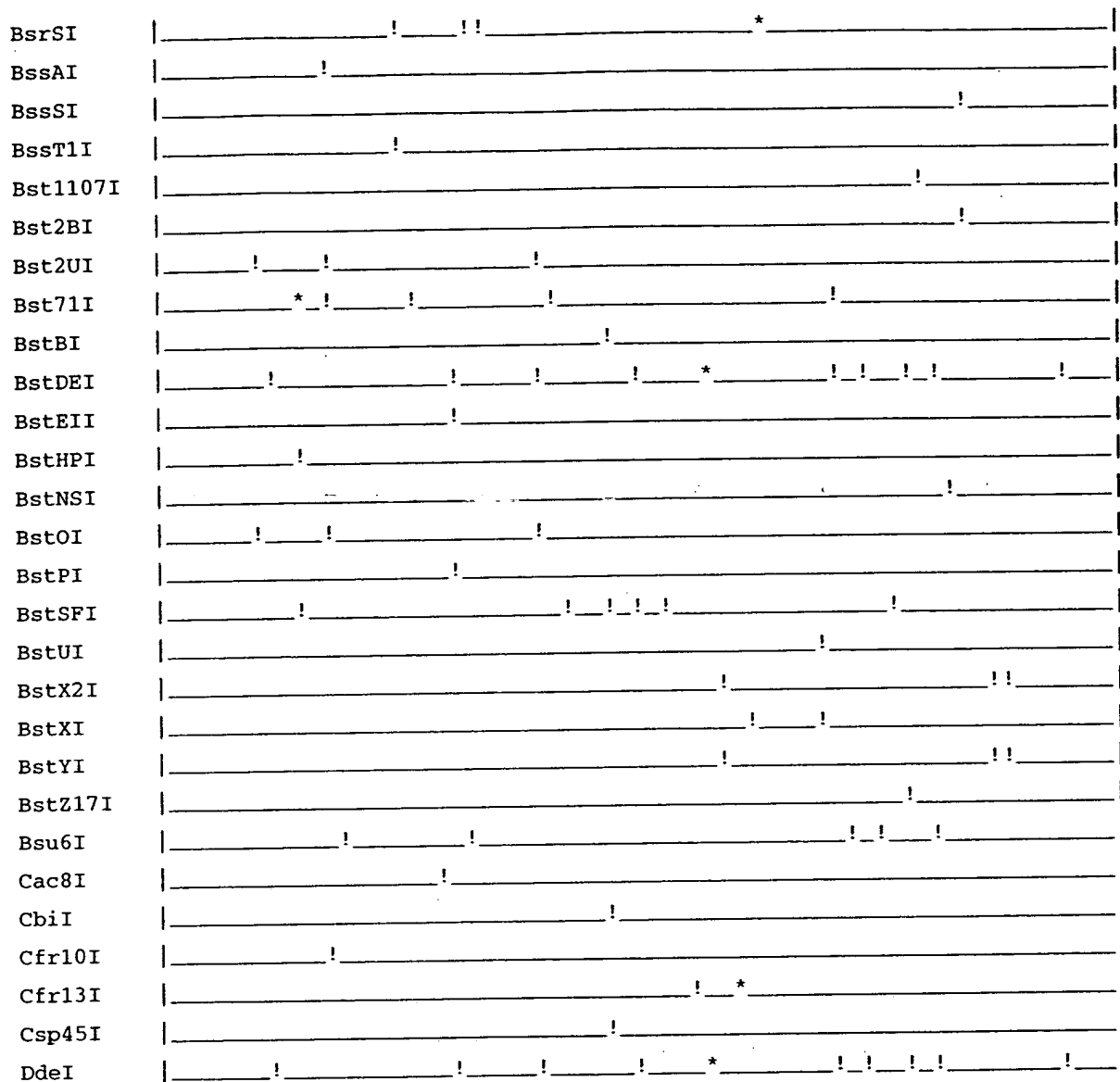


FIG. 2D

DpnI	_____*	_____!	_____!	_____!!	_____
DraI	_____	_____!	_____!	_____!	_____
DraII	_____	_____!	_____!	_____!	_____
DrdI	_____!	_____!	_____!	_____!	_____
DseDI	_____!	_____!	_____!	_____!	_____
Eam1104I	_____!	_____!	_____!	_____!	_____!
EarI	_____!	_____!	_____!	_____!	_____!
Eco130I	_____!	_____!	_____!	_____!	_____!
Eco24I	_____!	_____!	_____!	_____!	_____!
Eco31I	_____!	_____!	_____!	_____!	_____!
Eco47I	_____!	_____!	_____!	_____!	_____!
Eco57I	_____!	_____!	_____!	_____!	_____!
Eco88I	_____!	_____!	_____!	_____!	_____!
Eco91I	_____!	_____!	_____!	_____!	_____!
EcoNI	_____!	_____!	_____!	_____!	_____!
EcoO65I	_____!	_____!	_____!	_____!	_____!
EcoRI	_____!	_____!	_____!	_____!	_____!
EcoRII	_____!	_____!	_____!	_____!	_____!
EcoT14I	_____!	_____!	_____!	_____!	_____!
EcoT22I	_____!	_____!	_____!	_____!	_____!
EcoT38I	_____!	_____!	_____!	_____!	_____!
ErhI	_____!	_____!	_____!	_____!	_____!
Esp1396I	_____!	_____!	_____!	_____!	_____!
Esp3I	_____!	_____!	_____!	_____!	_____!
FauI	_____!	_____!	_____!	_____!	_____!
Fnu4HI	_____*	_____!	_____!	_____!	_____!

FIG. 2E

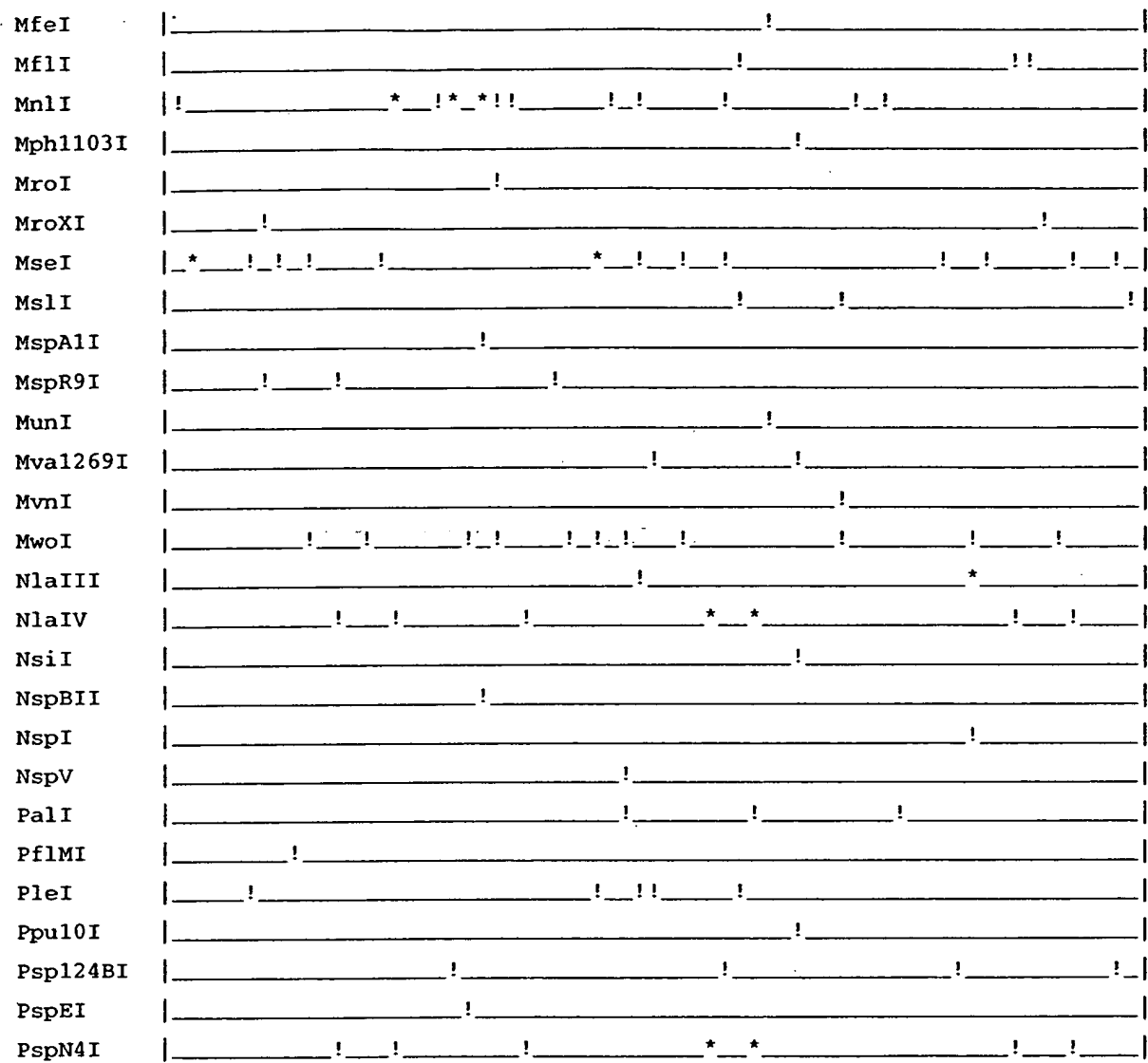


FIG. 2G

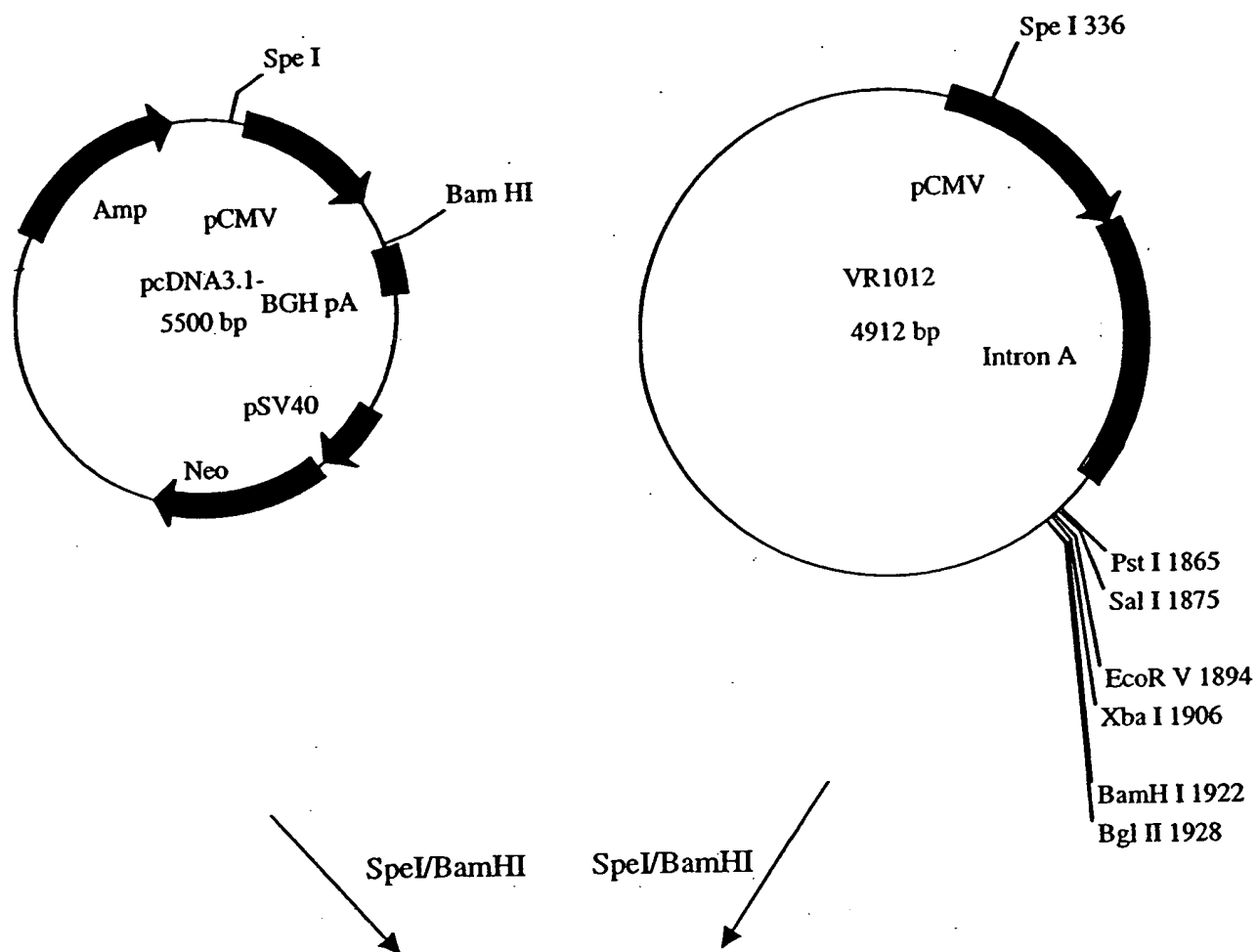


FIG. 3A

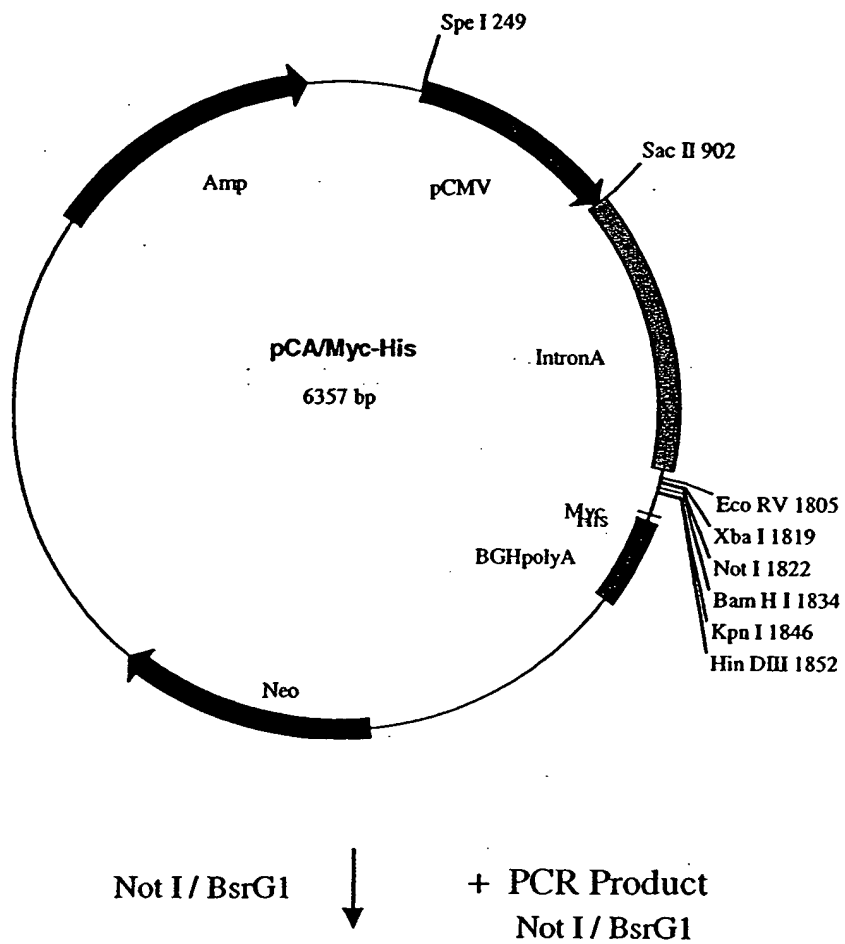


FIG. 3B

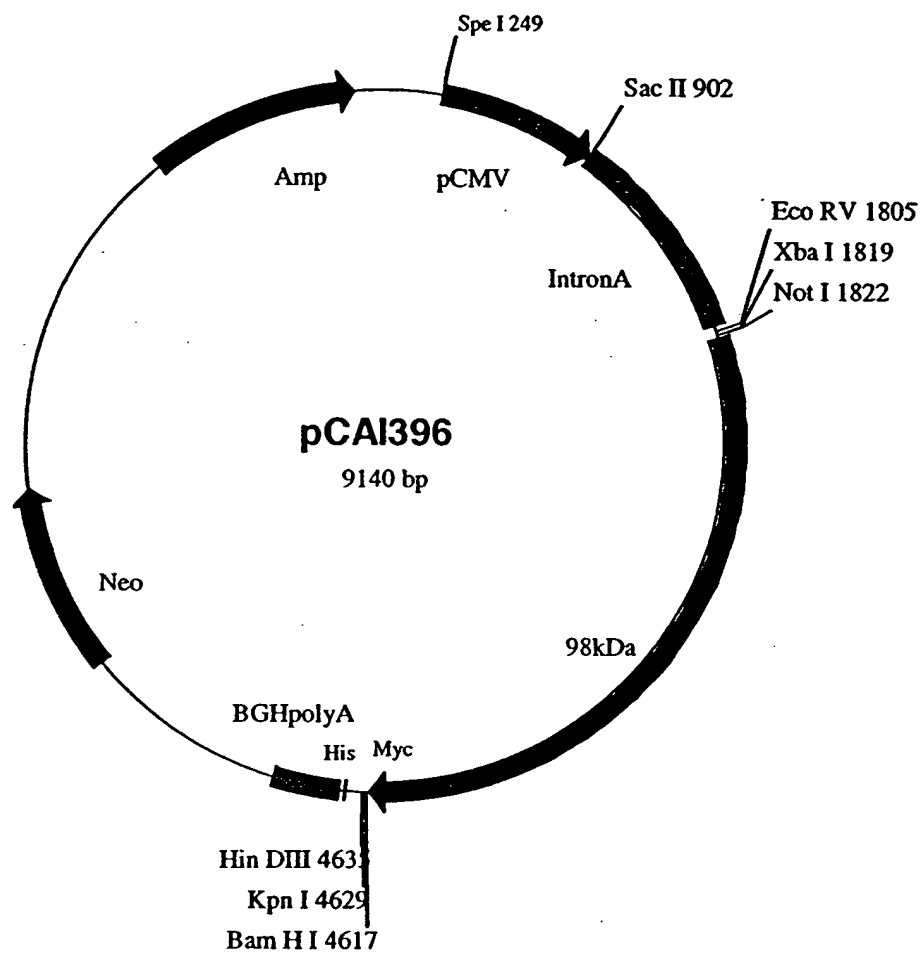


FIG. 3C

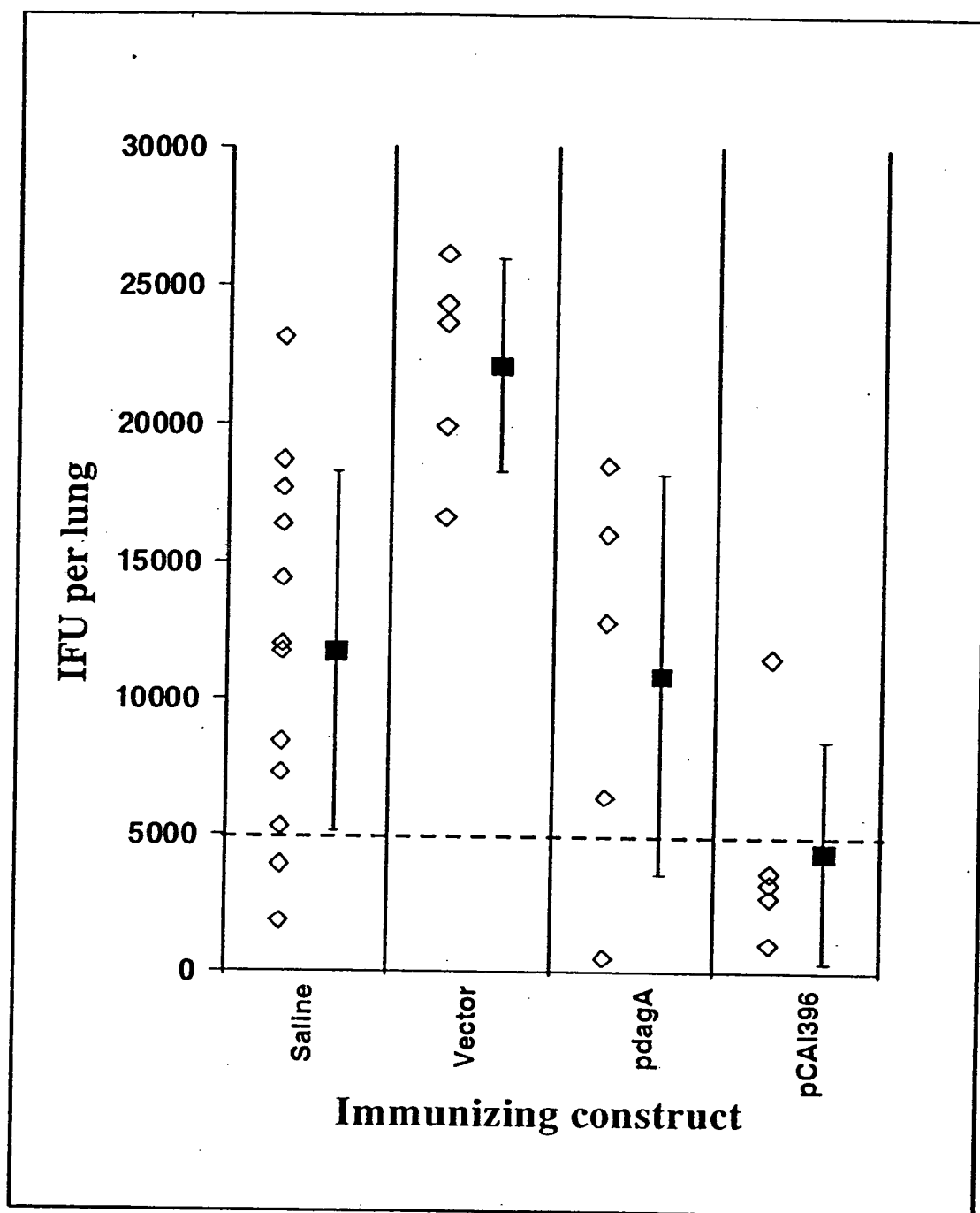


FIG. 4